

Patent Claims

1. Inductive momentary-contact switch with a locking mechanism, a sensor unit (L, x), and an evaluation circuit (C, A, FC, K, SL, R), whereby said sensor unit (L, x) is provided

with a sensor coil (L) that is applied to a printed circuit board,

and with a conductive actuator element, the distance (x) from which to said sensor coil (L) can be changed and can be locked for the purpose of changing its inductance by depressing a key,

whereby the inductance change in said sensor coil (L) initiates a switching function in said evaluation circuit (C, A, FC, K, SL, R).

2. Inductive position switch apparatus with a gearshift lever (AW), an actuator slide (BS), a sensor unit (L1, L2, y), and an evaluation circuit (C, A, FC, μ C, AMUX, R), whereby said sensor unit is provided

with at least two sensor coils (L1, L2; SE1, SE2, SE3, SE4, SE5, SEO, SEN, SER, SEP) that are applied adjacent to one another to a printed circuit board (LP),

and with at least one conductive actuator element (BF1, BF2) on said actuator slide (BS), whose coverage of two of said sensor coils (L1, L2, etc.) can be changed for changing their inductivities by displacing said actuator slide (BS),

whereby the inductance changes of said adjacently applied sensor coils (L1, L2; SE1, SE2, SE3, SE4, SE5, SEO, SEN, SER, SEP) initiate switching functions in said evaluation circuit (C, A, FC, μ C, AMUX, R)

and whereby for forming a temperature-stable and precise switching criterion only one of said sensor coils (L1 or L2, etc.) can be switched into said evaluation circuit (C, A, FC, μ C, AMUX, R).

3. Inductive switch in accordance with claim 2, characterized in that the signal evaluation of said sensor coils occurs via a multiplexer.

4. Inductive switch in accordance with any of claims 1 through 3, characterized by building said inductive sensor coil into an LC oscillating circuit.

5. Inductive switch in accordance with claim 4, characterized by an evaluation of the resonance frequency of the LC oscillating circuit into which the variable inductance enters.

6. Inductive switch in accordance with any of claims 1 through 3, characterized by the injection of an alternating voltage of constant amplitude and constant frequency (f) into said sensor coil with subsequent evaluation of the current amplitudes of the variable inductance.